CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.07/NSK/CSR-03/1085/CEMENT/2015-16

Date: 02.03.2016

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer**, Kodigehalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. N. Shivakumara,** No. 96, KHB Colony, Gandhinagara Extension, Yelahanka, Bangalore - 560 064.
***NAME OF THE WORK**	:	Improvements to roads in Sanjeevininagar in S.C. Colony in Ward No. 07, Byatarayanapura, BBMP, Bangalore.
***REFERENCE**	:	AEE/KSD/PR/185/2015-16 Dated: 01.03.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	01.03.2016
PERIOD OF TESTING	:	01.03.2016 to 02.03.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	150 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	475 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

AE-7

Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka Zone, BBMP
Bangalore

*Information is furnished by the Customer/Representative.

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VISHWANATH. I.A.
Chief Executive Officer

M.L.N.D
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Job No.: CTCE/BBMP/W.No.07/NSK/CSR-03/1085/SAND-Gradation/2015-16 : 02.03.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivakumara,**
No. 96, KHB Colony, Gandhinagara Extension, Yelahanka,
Bangalore - 560 064.

*** Name of Work** : Improvements to roads in Sanjeevininagar in S.C. Colony in Ward No. 07, Byatarayanapura, BBMP, Bangalore.

Reference : AEE/KSD/PR/185/2015-16 Dated: 01.03.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 01.03.2016

Date of Testing : 02.03.2016

Total Wt. of Aggregates in gms **1000**

AE-7

Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka Zone
Bangalore.

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.52	90-100	90-100	90-100	95-100
2.36	73.96	60-95	75-100	85-100	95-100
1.18	51.65	30-70	55-90	75-100	90-100
600 Micron	27.60	15-34	35-59	60-79	80-100
300 Micron	15.02	5-20	8-30	12-40	15-50
150 Micron	6.48	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

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Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.07/NSK/CSR-03/1085/AGG/GR/2015-16 : 02.03.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. N. Shivakumara,**
No. 96, KHB Colony, Gandhinagara Extension, Yelahanka, Bangalore - 560 064.

*** Name of Work** : Improvements to roads in Sanjeevininagar in S.C. Colony in Ward No. 07, Byatarayanapura, BBMP, Bangalore.

Reference : AEE/KSD/PR/185/2015-16 Dated: 01.03.2016

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 01.03.2016

Date of Testing : 02.03.2016

Total Wt. of Aggregates in gms= **10000**

AE-7

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bangalore.

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.33	95-100	85-100
20	39.50	30-70	0-20
10	14.36	10-35	0-5
4.75	2.21	0-5	-

* Information is furnished by the Customer/Representative

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Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.07/NSK/STEEL/2015-16 05.03.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer**, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. N. Shivakumara,** No. 96, KHB Colony, Gandhinagara Extension, Yelahanka, Bangalore - 560 064.
Name of the Work	:	Improvements to roads in Sanjeevininagar in S.C. Colony in Ward No. 07, Byatarayanapura, BBMP, Bangalore.
Reference	:	AEE/KSD/PR/185/2015-16 Dated: 01.03.2016
Date of Test	:	05.03.2016
Technical Reference	:	IS: 1786-2008

AE-7

Assistant Executive Engineer,
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.
Bangalore.

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	16	1.58	520	563	13.50	O.K	O.K

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Bangalore-560079.

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JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.07/NSK/STEEL/2015-16 05.03.2016

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer**, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. N. Shivakumara,** No. 96, KHB Colony, Gandhinagara Extension, Yelahanka, Bangalore - 560 064.
Name of the Work	:	Improvements to roads in Sanjeevininagar in S.C. Colony in Ward No. 07, Byatarayanapura, BBMP, Bangalore.
Reference	:	AEE/KSD/PR/185/2015-16 Dated: 01.03.2016
Date of Test	:	05.03.2016
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	515	558	13.35	O.K	O.K

AE-7

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka Zone, B.B.M.P., Bangalore.

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T-2377

Job No.: CTCE/BBMP/W.No.07/NSK/CSR-03/1085/CUBE/2015-16 05.04.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

***Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

***Agency** : **Mr. N. Shivakumara,**
No. 96, KHB Colony, Gandhinagara Extension, Yelahanka,
Bangalore - 560 064.

***Name of the work** : Improvements to roads in Sanjeevininagar in S.C. Colony in Ward No. 07, Byatarayanapura, BBMP, Bangalore.

Reference : AEE/KSD/PR/185/2015-16 Dated: 01.03.2016

***Sample ID** : Culvert Deck Slab Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

***Grade of Concrete** : M_{20}

Compressive Strength as on : 28^{th} day

Sample Received on : 05.04.2016

AE-7

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka, BBMP,
Bangalore.

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	08.03.2016	05.04.2016	8.385	479.2	21.30
2	08.03.2016	05.04.2016	8.476	490.4	21.80
3	08.03.2016	05.04.2016	8.583	513.7	22.83

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T-2377

Job No.: CTCE/BBMP/W.No.07/NSK/CSR-03/1085/CUBE/2015-16 07.04.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

***Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

***Agency** : **Mr. N. Shivakumara,**
No. 96, KHB Colony, Gandhinagara Extension, Yelahanka,
Bangalore - 560 064.

***Name of the work** : Improvements to roads in Sanjeevininagar in S.C. Colony in Ward No. 07, Byatarayanapura, BBMP, Bangalore.

Reference : AEE/KSD/PR/185/2015-16 Dated: 01.03.2016

***Sample ID** : Road Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

***Grade of Concrete** : M_{20}

Compressive Strength as on : 28^{th} day

Sample Received on : 07.04.2016

AE-7

Assistant Executive Engineer
Kodigehalli Sub Division,
Yelahanka Zone, B.B.M.P.,
Bangalore.

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	10.03.2016	07.04.2016	8.295	473.6	21.05
2	10.03.2016	07.04.2016	8.476	485.4	21.57
3	10.03.2016	07.04.2016	8.312	499.7	22.21

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Job No.: CTCE/BBMP/W.No.07/NSK/CSR-03/1085/CUBE/2015-16 08.04.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

***Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

***Agency** : **Mr. N. Shivakumara,**
No. 96, KHB Colony, Gandhinagara Extension, Yelahanka,
Bangalore - 560 064.

***Name of the work** : Improvements to roads in Sanjeevininagar in S.C. Colony in Ward No. 07, Byatarayanapura, BBMP, Bangalore.

Reference : AEE/KSD/PR/185/2015-16 Dated: 01.03.2016

***Sample ID** : Road Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

***Grade of Concrete** : M_{20}

Compressive Strength as on : 28^{th} day

Sample Received on : 08.04.2016

AE-7

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	11.03.2016	08.04.2016	8.152	481.5	21.40
2	11.03.2016	08.04.2016	8.263	496.3	22.06
3	11.03.2016	08.04.2016	8.375	508.4	22.60

Assistant Executive Engineer, Kodigehalli Sub Division, Yelahanka Zone, B.B.M.P., Bangalore.

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Job No.: CTCE/BBMP/W.No.07/NSK/CSR-03/1085/CUBE/2015-16 09.04.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

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***Agency** : **Mr. N. Shivakumara,**
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***Name of the work** : Improvements to roads in Sanjeevininagar in S.C. Colony in Ward No. 07, Byatarayanapura, BBMP, Bangalore.

Reference : AEE/KSD/PR/185/2015-16 Dated: 01.03.2016

***Sample ID** : Road Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

***Grade of Concrete** : M_{20}

Compressive Strength as on : 28^{th} day

Sample Received on : 09.04.2016

AE-7

Assistant Executive Engineer
Kodigehalli Sub Division
Yelahanka Zone
Bangalore.

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	12.03.2016	09.04.2016	8.263	485.3	21.57
2	12.03.2016	09.04.2016	8.457	496.8	22.08
3	12.03.2016	09.04.2016	8.326	511.6	22.74

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Chief Executive Officer

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Job No.: CTCE/BBMP/W.No.07/NSK/CSR-03/1085/CUBE/2015-16 11.04.2016

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

***Customer** : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

***Agency** : **Mr. N. Shivakumara,**
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Reference : AEE/KSD/PR/185/2015-16 Dated: 01.03.2016

***Sample ID** : Road Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

***Grade of Concrete** : M_{20}

Compressive Strength as on : 28^{th} day

Sample Received on : 11.04.2016

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	14.03.2016	11.04.2016	8.263	502.6	22.34
2	14.03.2016	11.04.2016	8.357	517.2	22.99
3	14.03.2016	11.04.2016	8.481	525.8	23.37

AE-7

Assistant Executive Engineer
Kodigehalli Sub Division, B.B.M.P.
Yelahanka, Bangalore.

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